

**What is claimed is:**

1. A method of switching packets, comprising:

preparing a plurality of tables, wherein each table corresponds to at least one output port of a plurality of  
5 output ports;

storing a plurality of input port designations in each table, wherein each input port designation corresponds to at least one input port of a plurality of input ports;

storing a plurality of packet identifiers in each table,  
10 wherein each packet identifier is stored together with an input port designation of the plurality of input port designations;

inputting at least one packet into an input port of the plurality of input ports, wherein the at least one packet  
15 includes a packet identifier;

locating a packet identifier from the plurality of packet identifiers stored in each table that matches the packet identifier of the at least one packet; and

connecting an input port corresponding to an input port  
20 designation stored with the located packet identifier, with one or more output ports of the plurality of output ports.

2. The method as recited in claim 1, wherein at least one of the plurality of packet identifiers stored in each  
25 table identifies an input port of the plurality of input ports.

3. The method as recited in claim 1, wherein at least one of the plurality of packet identifiers stored in each table identifies one output port or more than one output port  
5 of the plurality of output ports.

4. The method as recited in claim 1, wherein the packet identifier of the at least one packet identifies an input port of the plurality of input ports.  
10

5. The method as recited in claim 1, wherein the packet identifier of the at least one packet identifies one output port or more than one output port of the plurality of output ports.  
15

6. The method as recited in claim 1, wherein at least one packet identifier of the plurality of packet identifiers stored in each table identifies a multicast packet.

20 7. The method as recited in claim 1, wherein the packet identifier of the at least one packet identifies a multicast packet.

8. The method as recited in claim 1, wherein each table  
25 is configured as a semiconductor memory.

9. The method as recited in claim 1, wherein each packet identifier is stored together with the input port designation as one datum including a plurality of bits.

5

10. The method as recited in claim 1, wherein the one or more output ports are determined based on each table storing the located packet identifier.

10 11. A method of switching cells, comprising:

preparing a plurality of tables, wherein each table corresponds to at least one output port of a plurality of output ports;

15 storing a plurality of input port designations in each table, wherein each input port designation corresponds to at least one input port of a plurality of input ports;

storing a plurality of cell identifiers in each table, wherein each cell identifier is stored together with an input port designation of the plurality of input port designations;

20 inputting at least one cell into an input port of the plurality of input ports, wherein the at least one cell includes a cell identifier;

locating a cell identifier from the plurality of cell identifiers stored in each table that matches the cell  
25 identifier of the at least one cell; and

connecting an input port corresponding to an input port designation stored with the located cell identifier, with one or more output ports of the plurality of output ports.

5

12. The method as recited in claim 11, wherein at least one of the plurality of cell identifiers stored in each table identifies an input port of the plurality of input ports.

10

13. The method as recited in claim 11, wherein at least one of the plurality of cell identifiers stored in each table identifies one output port or more than one output port of the plurality of output ports.

15

14. The method as recited in claim 11, wherein the cell identifier of the at least one cell identifies an input port of the plurality of input ports.

15. The method as recited in claim 11, wherein the cell identifier of the at least one cell identifies one output port or more than one output port of the plurality of output ports.

16. The method as recited in claim 11, wherein at least one cell identifier of the plurality of cell identifiers stored in each table identifies a multicast cell.

25

17. The method as recited in claim 11, wherein the cell identifier of the at least one cell identifies a multicast cell.

5

18. The method as recited in claim 11, wherein each table is configured as a dynamic random access memory.

19. The method as recited in claim 11, wherein each cell  
10 identifier is stored together with the input port designation as one datum including a plurality of bits.

20. The method as recited in claim 11, wherein the one  
or more output ports are determined based on each table  
15 storing the located cell identifier.

21. A switching apparatus comprising:

a plurality of input ports, wherein each of the  
plurality of input ports is capable of receiving at least one  
20 packet including a packet identifier;

a plurality of output ports;

a plurality of tables for storing a plurality of packet  
identifiers and a plurality of input port designations  
corresponding to the plurality of input ports, wherein each  
25 table corresponds to at least one output port of the plurality

of output ports and stores each packet identifier together with an input port designation of the plurality of input port designations;

5 a switching control unit for outputting a signal for connecting an input port corresponding to an input port designation stored with the packet identifier of the at least one packet, with at least one output port of the plurality of output ports.

10 22. The switching apparatus as recited in claim 21, wherein the switching unit connects the input port corresponding to the input port designation stored with the packet identifier of the at least one packet with the at least one output port.

15

23. A method of switching packets, comprising:

storing a plurality of input port designations in at least one table, wherein each input port designation corresponds to at least one input port of a plurality of input  
20 ports;

storing a plurality of packet identifiers in the at least one table, wherein each packet identifier is stored together with an input port designation of the plurality of input port designations;

25 inputting at least one packet into an input port of the

plurality of input ports, wherein the at least one packet includes a packet identifier;

locating a packet identifier from the plurality of packet identifiers stored in the at least one table that  
5 matches the packet identifier of the at least one packet; and

connecting an input port corresponding to an input port designation stored with the located packet identifier, with at least one output port of the plurality of output ports.

10 24. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for switching a packet, the method steps comprising:

storing a plurality of input port designations in at  
15 least one table, wherein each input port designation corresponds to at least one input port of a plurality of input ports;

storing a plurality of packet identifiers in the at least one table, wherein each packet identifier is stored  
20 together with an input port designation of the plurality of input port designations;

inputting at least one packet into an input port of the plurality of input ports, wherein the at least one packet includes a packet identifier;

25 locating a packet identifier from the plurality of

packet identifiers stored in the at least one table that matches the packet identifier of the at least one packet; and

connecting an input port corresponding to an input port designation stored with the located packet identifier, with at  
5 least one output port of the plurality of output ports.